respiratory disease. The virus causing the infection has been named - severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Symptoms are mainly respiratory, around 40% may manifest with mild neurological symptoms.

Methods

Methods: We included 35 patients with SARS-CoV-2 infection hospitalized in Intensive Care Unit, with presentation of severe neurological events.

Results

Results: Our hospital (San José, Tecnológico de Monterrey) has treated 2,920 patients infected by COVID19 in 1 year, 351 patients have required intubation, 1.19% have severe neurological manifestations and the reported mortality is 11.4%. This cohort includes 82% males, median age 57.9 ($\pm$14.96 years), first day of consultation by the neurology service was 22.21 ($\pm$19.8 days), most frequent neurological presentation was encephalitis in 31.4%. The rest of neurological events were 5.7% myasthenic crisis, 2.9% microangiopathy, 5.7% Guillain Barre syndrome, 11.4 % status epilepticus, 22. 9% STROKE, and around 20% presented Posterior reversible encephalopathy syndrome (PRES) and Autonomic dysfunction in 'long COVID'.

Conclusions

Conclusion: Reports of severe neurological involvement in COVID-19 are increasing, which makes this problem particularly relevant to neurological critical care therapy. The nervous system can be directly or, more frequently, indirectly be involved. We anticipate that these neurological events will represent a large proportion of primary and secondary care consultations in coming months.

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119854

Fatigue and "brain fog" in the aftermath of mild COVID-19: A neuropsychological and TMS study

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Background and aims

Fatigue and "brain fog" are frequently complained by patients even after mild COVID-19. We investigated whether these symptoms could be related to central neurological dysfunctions.

Methods

Sixty-seven patients complaining of fatigue and/or "brain fog" and 22 healthy subjects (HS) were enrolled. Fatigue, perceived exertion (evaluated after motor task) and "brain fog" were evaluated. Global cognition and executive functions were assessed with Montreal Cognitive Assessment (MoCA) and Frontal Assessment Battery (FAB). Attention was measured with Sustained Attention, Stroop and Navon computerized-tasks. Transcranial magnetic stimulation (TMS) of the primary motor cortex (M1)

evaluated resting motor threshold (RMT), motor evoked potential (MEP) amplitude, and cortical silent period (SP). Intracortical activity was evaluated with paired-pulse TMS protocols including short-interval intracortical inhibition (SICI), reflecting GABAA-mediated inhibition, long-interval intracortical inhibition (LICI), a marker of GABAB receptor activity, and short-latency afferent inhibition (SAI) that indexes central cholinergic transmission.

Results

Patients reported high level of perceived fatigue, exertion and "brain fog". MOCA and FAB highlighted poorer performances in patients than HS. At computerized tasks, both, sustained and executive attention were impaired. Patients presented higher RMTs, lower MEPs amplitude and longer SPs, as compared to HS, concurring with a reduced M1 excitability. LICI and SAI were impaired, indicating altered GABAB- and cholinergic neurotransmission.

Conclusions

Overall, our results demonstrate, in long COVID-19, an important link between fatigue, "brain fog" and central nervous system dysfunctions, characterized by frontal lobe cognitive impairments and altered neurotransmission.

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119855

Differential characteristics in the management of acute confusional syndrome secondary to COVID-19 pneumonia

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Background and aims

Acute Confusional Syndrome (ACS) is the most common neuropsychiatric complication in COVID-19 infection. Its management is still a challenge because the data and recommendations based on the evidence are limited. To describe the differential characteristics of the hospital management of ACS in patients with COVID-19 pneumonia compared to ACS secondary to other causes.

Methods

An observational descriptive study has been carried out in patients with ACS who have required assessment by the liaison psychiatry service of Hospital del Mar between February to April 2020. The sample was divided in 2 groups (with and without COVID-19 pneumonia). Chi-square and Fisher's tests were used for comparisons.

Results

The total sample was 62 patients, 26 of them diagnosed with COVID-19 pneumonia. The duration of ACS was longer in COVID-19 patients, mean of 12.68 days (SD 13.64). Dexmetomidine (26 vs. 0) and olanzapine (13 vs. 3) were used more frequently in COVID-19 patients, $p < 0.001$. In COVID-19 patients a greater number of different antipsychotic drugs were used, mean of 2.40 (SD 1.323), and they received less family support (4) compared to non-COVID-19 (22), $p < 0.005$.

Conclusions

ACS associated with COVID-19 pneumonia in the patients in our sample is more difficult to manage than ACS associated with other pathologies, similar to which described in other series. It is related to a longer duration of the confusional symptoms and difficulties for control it.

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